Permit No. OK0026964
Date of Issuance: October 9, 1992

OKLAHOMA STATE DEPARTMENT OF HEALTH AND THE
U.S. ENVIRONMENTAL PROTECTION AGENCY JOINT PERMIT

WASTEWATER DISCHARGE

In accordance with Title 63 O.S. 1981, Sections 1-904, 1-908, 1-909 and the Water Pollution Control Regulations of the Oklahoma State Board of Health; the Federal Clean Water Act, Public Law 95-217 (33 U.S.C. 1251 et seq.), Section 402; and NPDES Regulations (40 CFR parts 122, 124 and 403),

Tahlequah Public Works Authority
P.O. Box 29
Tahlequah, Oklahoma 74465

is hereby authorized to discharge treated wastewater from a facility located at approximately

NE¼ of NE¼ of SE¼ of Section 3,
Township 16 North, Range 22 East of I.M.,
in Cherokee County, State of Oklahoma

to receiving waters: Tahlequah Creek to the Illinois River

at a point located approximately

Latitude: 35°-53'-28" N
Longitude: 94°-57'-05" W

Planning Segment No.: 121700

All authorized discharges shall comply with the Water Pollution Control Regulations of the Oklahoma State Board of Health, which are hereby incorporated by reference; the Federal Clean Water Act and NPDES Regulations, and all provisions, conditions, and requirements included in this permit.

This permit shall become effective November 10, 1992

This permit and authorization to discharge shall expire at midnight, November 9, 1997

A.1. Effluent Limitations

During the period beginning the effective date and lasting through
permittee is authorized to discharge treated wastewater in accordance wit
limitations:

Effluent Characteristics	Discharge Limitations		
	Mass (lbs/day) Monthly Average	Concentration (mg/l) Monthly Average	Weekly Average
Biochemical Oxygen Demand 5 Day (BOD_5)	334.0	7.6	11.4
Total Suspended Solids (TSS)	483.5	11.0	16.5
Ammonia (NH_3-N)	65.9	1.5	2.3
Phosphorous	44.0	1.0	1.5
Dissolved Oxygen (DO)	N/A	minimum: 7 mg/l	
Fecal Coliform[a] (May 1 - Sept. 30)	N/A	200/100	400/100
Total Coliform[a] (Oct. 1 - April 30)	N/A	5000/100	20000/1

Toxicity Testing to be Reported:
Ceriodaphnia dubia - 7-day Survival and Reproduction
Fathead Minnow (Pimephales promelas) -
7-day Larval Survival and Growth

The pH shall not be less than 6.5 standard units nor greater than 9.0 standar
monitored by grab samples collected daily.

There shall be no discharge of floating solids or visible foam in other than

Samples taken in compliance with the monitoring requirements specified above
discharge from the final treatment unit.

Flow (measured in million gallons per day) shall be monitored daily by totali
reported as a 30-day average and a daily maximum.

B. Definitions

In addition to those included in the Water Pollution Control Regulations of the Oklahoma State Board of Health, and those contained in Section 502 of the Federal Clean Water Act, the following definitions shall apply to this permit:

1. "Weekly average" or "7-day average", other than for fecal coliform bacteria is the arithmetic mean of the values for all effluent samples collected during a calendar week. The weekly average for fecal coliform bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.
2. "Monthly average" or "30-day average", other than for fecal coliform bacteria, is the arithmetic mean of the values for all effluent samples collected during a calendar month. The monthly average for fecal coliform bacteria is the geometric mean of the values for all effluent samples collected during a calendar month.
3. "Daily Maximum" concentration means the highest daily determination of concentration for any day during the calendar month.
4. The Act is the Federal Clean Water Act, Public Law 95-217, as amended.
5. NPDES is the National Pollutant Discharge Elimination System which means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318, and 405 of the Clean Water Act.

C. Monitoring and Reporting

1. All monitoring undertaken in compliance with the terms of this permit shall be conducted at the frequency and sample site specified in Part A of this permit and in Section 12 of the Water Pollution Control Regulations of the Oklahoma State Board of Health, (copy attached). Grab or composite samples shall be taken as specified in the monitoring requirements of Part A.
2. Discharge monitoring reports shall be prepared monthly and submitted to the appropriate County Health Department office, the Oklahoma State Department of Health and the regional office of EPA at the addresses* shown below no later than the tenth (10th) day of the following month. All operating records and reports shall comply with Section 13 of the Water Pollution Control Regulations of the Oklahoma State Board of Health, and the requirements of 40 CFR 122.41(j).

*Water Management Division
Enforcement Branch (6W-E)
U.S. Environmental Protection
Agency, Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

Water Quality Service - 0207
Oklahoma Department of Health
1000 N. E. Tenth Street
Oklahoma City, OK 73117-1299

3. All cases of noncompliance with any term of this permit and all bypasses shall be reported in writing to the OSDH and to the EPA as specified in Section 3 of the Water Pollution Control Regulations of the Oklahoma State Board of Health. Certain violations are required to report within 24 hours as specified in Section D-13 below.

   The noncompliance reports shall contain the following information:

   - A description of the noncompliance and its cause;

   - The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it was expected to continue;

   - Steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

4. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

5. All sampling and analytical methods used to meet monitoring requirements specified above shall conform to Section 304(h) of the Act and the regulations, 40 CFR part 136 and OSDH rules and regulations.

6. The EPA Regional Administrator or the State Commissioner of Health may at his/her discretion require additional sampling, reporting or monitoring.

7. Federal laws provide that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two years per violation, or both. State laws provide for a fine of $5000 for such a violation.

   In addition, Federal laws provide that any person who knowingly makes any false statements, representation or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two years per violation, or by both. State laws provide for a fine of $5000 for such a violation.

D. Other Conditions

1. Upon timely application for a permit, any prior permit remains in effect until a new one is issued.

2. Duty to comply:

a. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the applicable State and Federal laws and Oklahoma State Rules and Regulations, and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

b. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Federal Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

3. Duty to mitigate:

The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

4. Duty to halt or reduce activity:

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

5. Duty to reapply:

Permittees who wish to continue to discharge subsequent to the expiration date of their permit must apply for reissuance of the permit using proper forms, not less than 180 days prior to the permit expiration date.

6. Change in discharge:

a. The permittee shall give advance notice of and planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

b. Any change in the facility discharge (including the introduction of any new source or significant discharge or significant changes in the quantity or quality of existing discharges to the treatment system that may result in new or increased discharges of pollutants) must be reported to the permitting authorities. In no case are any new connections, increased flows, or significant changes in influent quality permitted that will cause violations or add to existing violations of the effluent limitations specified herein.

7. Permit modification, suspension and revocation:

a. This permit may be modified, suspended or revoked for cause. The filing of a request for a permit modification or reissuance, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

b. After notice and opportunity for a hearing, this permit may be modified, suspended, or terminated during its term in accordance with 40 CFR 122.62 and 122.64; Title 63; O.S. 1981, Sections 1-106, 1-908; Title 75, O.S. 1981, Section 314.

8. Transfer of ownership or control:

In the event of any change in control or ownership of facilities from which the authorized discharges emanate, the permittee shall submit a written agreement, at least 30 days in advance of the proposed transfer date, containing a specific date for transfer of permit responsibility and coverage between the current and new permittees.

9. Property rights:

This permit does not convey any property rights of any sort, or any exclusive privilege.

10. Duty to provide information:

The permittee shall furnish within a reasonable time, any information which the Commissioner and/or the EPA Regional Administrator may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish, upon request, copies of records required to be kept by this permit.

11. Proper operation and maintenance:

The permittee shall provide proper operation and maintenance which includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit.

Collected screenings, slurries, sludges and other solids shall be disposed of in such a manner as to prevent entry of those wastes (or runoff from the wastes) into navigable waters or their tributaries.

12. Power failure:

The permittee is responsible for maintaining adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures either by means of alternative power sources, standby generators, or retention of inadequately treated effluent.

13. Twenty-four hour reporting:

The permittee shall report to the OSDH and to the EPA:

- Any noncompliance which may endanger health or the environment.
- Any unanticipated by-pass;
- Any upset which exceeds any effluent limitations in the permit; and
- Violation of a maximum daily discharge limitation for any toxic pollutant or hazardous substance listed under Section D-17 to be reported within 24 hours.

Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. The OSDH shall be notified by calling (405) 271-5205 during normal working hours. EPA maintains a 24 hour answering machine for around the clock reporting. That number is (214) 655-6595. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission or noncompliance report shall contain the information listed in Section C-3 above.

14. Upsets:

An upset constitutes an affirmative defense to an enforcement action brought for noncompliance with technology-based permit effluent limitations if the following requirements are met.

A permittee who wishes to establish the affirmative defense of upset shall demonstrate through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An upset occurred and that the permittee can ident ify the specific cause(s) of the upset;

b. The permitted facility was at the time being properly operated;

c. The permittee submitted notice of the upset as required in parts C.3 and D.13 of this permit;

d. The permittee complied with any remedial measures under part D.3.

15. Right of entry:

The permittee shall allow the Commissioner, the Regional Administrator, and/or their authorized representatives, upon presentation of credentials and such other documents as may be required by the law:

a. To enter upon the permittee's premises or other premises under the control of the permittee, where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit;

b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit, or the Act;

c. To inspect at reasonable times any monitoring equipment or monitoring method required in this permit;

d. To sample at reasonable times any discharge of pollutants; or

e. To perform at reasonable times an operation and maintenance inspection of the permitted facility.

16. Severability:

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

17. Contributing Industries and Pretreatment Requirements:

a. The following pollutants may not be introduced into the treatment facility:

(1) Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;

(2) Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the works are specifically designed to accommodate such discharges;

(3) Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in interference;

(4) Any pollutant, including oxygen demanding pollutants (BOD, etc.), released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the POTW;

(5) Heat in amounts which will inhibit biological activity in the POTW resulting in interference, but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40 degrees Centigrade (104 degrees Fahrenheit) unless the Approval Authority, upon request of the POTW, approves the alternate temperature limit;

(6) Petroleum oil, nonbiodegradable cutting oil, or products of mineral origin in amounts that will cause interference or pass through;

(7) Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and

(8) Any trucked or hauled pollutants, except at discharge points designated by the POTW.

b. The permittee shall comply with the pretreatment requirements in 40 CFR 403, as specified in the following schedule of compliance. The final approvable package is due 12 months from the effective date of the permit.

ACTIVITY NUMBER	ACTIVITY	DATE
1.	Submit to OSDH and EPA the results of an industrial user survey which consists of a qualitative analysis of pollutants being contributed by all industrial sources in its entire municipal system (including all treatment plants). The industrial users should be asked to provide information on the type and approximate quantity of pollutants discharged into the system. This information may be derived from knowledge of the facility's process, and should not require any sampling at the source. (Unless the Permitting Authority notifies the permittee otherwise within 30 days after receipt of this survey, the permittee will be required to continue the program past Activity No. 1. If notified that a pretreatment program is not necessary, the permittee will submit to OSDH and EPA an update of its industrial user survey, documenting changes in industrial flow and/or characteristics and new contributing industries when next reapplying for this NPDES permit.)	2 months from the effective date of permit
2.	Submit to the OSDH and EPA the results of an influent pollutant scan of a 24-hour composite sample to determine all pollutants being contributed to the system. The type of scan to be performed is the basic priority pollutant scan of the 126 pollutants plus any other additional pollutants designated in your State Water Quality Standards. All sampling, analyses and method detection limits must be done in accordance with 40 CFR Part 136. This scan will also serve as the initial scan necessary for developing technically based local limits (Activity 5 as follows). (a) From the qualitative information supplied by the industrial users in Activity 1 and the quantitative information collected in the pollutant scan, the permittee shall determine which industrial users may be discharging pollutants which may affect the operation of the POTW(s) or pass through untreated. (b) Sampling and analysis to quantify the pollutants discharged by the industrial users identified in the investigation of (a) above, shall be completed.	4 months from the effective date of permit

3.	Submit to the OSDH and EPA a design of a sampling, inspection and reporting program which will implement the requirements of 40 CFR 403.8 and 403.12, and in particular those requirements referenced in 40 CFR 403.8(f)(1)(iv-v), 403.8(f)(2)(iv-vi) and 403.12(g-j and l-p).	5 months from the effective date of permit
4.	Submit to the OSDH and EPA an evaluation of the financial programs, revenue sources, equipment and staffing, which will be employed to implement the pretreatment program (as required by 40 CFR Parts 403.8(f)(3) and 403.9(b)(3)).	6 months from the effective date of permit
5.	Submit to the OSDH and EPA an approvable technically based local limits submission package as required by 40 CFR 403.8(f)(4). Technically based local limits should be developed in accordance with "EPA Region 6 Technically Based Local Limits Development Guidance".	9 months from the effective date of permit
6.	40 CFR 403.8(f)(1) requires POTWs to apply and enforce the requirements of sections 307(b) and (c), and 402(b)(8) of the Act and any regulations implementing those sections. Submit to the OSDH and EPA: (a) a statement from the city solicitor, a city official acting in a comparable capacity, or the city's independent counsel, that the POTW has the authority to carry out the program; (b) a copy of any statute, ordinance, regulation, contract, agreement, or other authority that will be relied on by the POTW to administer the program; (c) a statement reflecting the endorsement of or approval by the local boards or bodies responsible for supervising and/or funding the program; and (d) any additional documents required in multi-jurisdictional situations for administration of the program.	10 months from the effective date of permit
7.	Submit to the OSDH and EPA an approvable pretreatment program (and removal credit approval, if desired and appropriate) as required by 40 CFR 403.9. The approvable pretreatment program shall include a compilation of all previously submitted pretreatment program activities as finally amended and supplemented (i.e. Activities 1-6).	12 months from the effective date of permit

Upon notification by OSDH and EPA of approvability of the submitted program, the permittee is required to submit an official request for program approval, including three (3) copies of the program deemed to be approvable.

c. If the permittee does not comply with any of the increments of the progress in the above schedule, the permittee shall submit to OSDH and EPA within 14 days of the activity due date a report, including, at a minimum, the date on which the required activity will be submitted, the reason for the delay, and the steps taken to return to the established schedule.

d. Upon approval of a local pretreatment program by the Approval Authority, this permit will be modified, or, alternatively, revoked and reissued to incorporate that pretreatment program.

e. The permittee may develop and submit an approvable pretreatment program at any time before the deadline established in Activity 7.

f. The permittee may apply for authority to revise categorical pretreatment standards to reflect POTW removal of pollutants in accordance with the requirements of 40 CFR 403.7 at any time.

g. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Act, including any requirements established under 40 CFR Part 403.

h. The permittee shall provide adequate notice of the following:

(1) Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Act if it were directly discharging those pollutants; and

(2) Any substantial change in the volume or character of pollutants being introduced into the treatment works.

Adequate notice shall include information on (i) the quality and quantity of effluent to be introduced into the treatment works, and (ii) any anticipated impact of such change in the quality or quantity of effluent to be discharged from the publicly owned treatment works.

18. Sewage Sludge Requirements:

a. The permittee shall use only those sewage sludge disposal practices that comply with the federal regulations for landfills and solid waste disposal established at 40 CFR 257 and the Oklahoma State Regulations Governing Solid Waste and Sludge Management.

b. The permittee shall handle and dispose of sewage sludge in accordance with all applicable state and federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants which may be present.

c. If an applicable "acceptable management practice" or numerical limitation for pollutants in sewage sludge promulgated at Section 405(d)(2) of the Clean Water Act, which includes the proposed 40 CFR Part 503 regulations, is more stringent than the sludge pollutant limit or acceptable management practice in this permit, or controls a pollutant not listed in this permit, this permit may be modified or revoked and reissued to conform to the requirements promulgated at Section 405(d)(2). In accordance with 40 CFR 122.41, one year following promulgation of the technical standards for sludge use and disposal, the facility must be in compliance with all requirements regardless of whether the permit is modified to incorporate these standards.

d. Sewage sludge shall be tested annually in accordance with the method specified at 40 CFR Part 268, Appendix I (Toxicity Characteristic Leaching Procedure [TCLP]) or other approved methods. Sludge shall be tested after final treatment prior to leaving the POTW site. Sewage sludge failing this test shall be handled according to RCRA standards for the disposal of hazardous waste in accordance with 40 CFR Part 262. Following failure of any TCLP test, the disposal of sewage sludge exhibiting the solid waste toxicity characteristics at 40 CFR 261.24 (as demonstrated by the results of the TCLP tests), in other than a certified hazardous waste disposal facility shall be prohibited. The RCRA Information Management Section, telephone no. (214) 655-6750, and the OSDH Waste Management Service, telephone (405) 271-5338, shall be notified of test failure within 24 hours. Written reports shall be provided to these offices within 7 days after failing the TCLP.

The reports will contain test results, certification that unauthorized disposal has not occurred and a summary of alternative disposal plans that comply with RCRA standards for the disposal of hazardous waste. The reports shall be addressed to: Director, Hazardous Waste Management Division, EPA Region 6, Mail Code 6H, 1445 Ross Avenue, Dallas, Texas 75202-2733; and to: Chief, Waste Management Service-0205, OSDH, 1000 N.E. Tenth Street, Oklahoma City, Oklahoma 73117-1299. A copy of this report shall be sent to the Chief, Enforcement Branch, Water Management Division, EPA, Mail Code 6W-E, at the same EPA address above.

The permittee shall prepare an annual report on the results of all sludge toxicity testing to be submitted to the Water Management Division. This annual report shall be submitted to the permitting agency in the month the permit becomes effective. The first report is due one year following the effective date of the permit.

e. Sewage Sludge Management Practices

1) Sewage sludge, if land applied, shall not be spread when soil is saturated, frozen or covered with ice, or during rain or when precipitation is imminent.

2) Disposal of sewage sludge shall not cause discharge to waters of the United States or cause non-point source pollution of waters of the United States.

3) Disposal of sewage sludge shall not cause any underground drinking water source to exceed the limitations in 40 CFR 257, Appendix I.

4) Disposal of sewage sludge shall not cause or contribute to the taking of any endangered or threatened species of plant, fish, or wildlife.

5) Disposal of sewage sludge shall not result in the destruction or adverse modification of the critical habitat of endangered or threatened species.

6) Disposal of sewage sludge in a floodplain shall not restrict the flow of the base flood, reduce the temporary storage capacity of the floodplain, or result in a washout of solid waste, so as to pose a hazard to human life, wildlife or land and water uses.

2) Sewage sludge or septic tank pumpings that are applied to the land surface or incorporated into the soil shall be treated by a Process to Further Reduce Pathogens (PFRP) prior to application or incorporation, if crops for direct human consumption are grown within 18 months subsequent to application or incorporation. Processes to further reduce pathogens are composting, heat drying, heat treatment, thermophilic aerobic digestion and other approved methods. Such treatment is not required if there is not contact between the solid waste and the edible portion of the crop. However in this case the solid waste shall be treated by a PSRP, prior to application. Public access to the facility shall be controlled for at least 12 months. Grazing by animals whose products are consumed by humans shall be prevented for at least 1 month. If crops for direct human consumption are not grown within 18 months of application or incorporation, the requirements of h.1) apply.

3) The permittee shall ensure that all landowners accepting sewage sludge which does not meet PFRP shall restrict public access on sludge treated land for twelve (12) months and prohibit grazing by animals whose products are consumed by humans for at least one month.

i. For all land application sites used for food-chain crops the permittee shall monitor soil and sewage sludge as follows:

Monitoring Requirements

Measurement Frequency

Parameter	Soil	Sludge
pH (S.U.)*	Each Application#	1/year
Cation Exchange Capacity (meq/100g)**	Each Application#	N/A
Total Cadmium (mg/kg)***	N/A	1/year
Total Copper (mg/kg)***	N/A	1/year
Total Lead (mg/kg)***	N/A	1/year
Total Nickel (mg/kg)***	N/A	1/year
Total Zinc (mg/kg)***	N/A	1/year
Total PCBs (mg/kg)****	N/A	1/year

* Soil pH and sludge pH shall be analyzed by the electrometric method in "Test Methods for Evaluating Solid Waste", EPA SW846, 40 CFR 260.11. Based on sample type, either Method 9040 or Method 9045 is appropriate for determining pH. Samples shall be taken to the depth of cultivation or solid waste placement, whichever is greater. The pH of the solid waste and soil mixture must be adjusted to and maintained at 6.5 or greater whenever food chain crops are grown.

** Cation exchange capacity (CEC) for soil shall be sampled at the depth of cultivation or soil waste placement, whichever is greater, and analyzed by the summation method for distinctly acid soils or the sodium acetate method for neutral, calcareous or saline soils in "Test Methods for Evaluating Solid Waste", EPA SW846, 40 CFR 260.11. Methods 9080 and 9081 are appropriate for determining CEC. The correct method is determined by soil type.

*** Analysis for metals in sludge and soil shall be performed according to methods outlined in "Test Methods for Evaluating Solid Waste", EPA SW846. Method 3050 shall be used for the determination of total metals in the sludge and soil.

**** Method 3540 or 3550 shall be used for the extraction of PCBs from the sludge and soil, as appropriate. Methods 3620, 3640, and/or 3660 shall be used for the cleanup of the extract for PCB analysis. Method 8080 shall be used for the analytical determination of PCBs in the sludge and soil.

Each application is defined as any period of time required to cover an entire site not to exceed one year.

j. Reporting Requirements

The permittee shall report annually on the Discharge Monitoring Report in the month the permit is effective the following information for each site:

1) Results of Toxicity Characteristic Leaching Procedure conducted on the sludge to be applied.

2) Maximum loading allowed of Cadmium, Copper, Lead, Nickel and Zinc (soil pH and CEC dependent) and cumulative amount applied in kg/ha or lbs/acre for each metal.

3) PCB concentration in sludge in mg/kg.

4) Level of disinfection attained: PSRP or PFRP.

7) The sewage sludge application rate shall not exceed recommended loading amounts of nitrogen for vegetation grown on the sludge amended soil. These rates must be calculated based on methods recommended by the 1983 "EPA's Land Application Manual", or State or Local guidelines where more protective.

8) Disposal of sewage sludge shall comply with the requirements of Sludge Management Plan number SP3511005 approved by OSDH on July 23, 1991. The plan allows the permittee to land apply sludge to food chain crops including pasture land(s).

f. The permittee shall give 120 days prior notice to the Director of any change planned in the sewage sludge disposal practice. Any change shall include any planned physical alterations or additions to the permitted treatment works, changes in the permittee's sludge use or disposal practice, and also alterations, additions or deletions of disposal sites. These changes may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional disposal sites not reported during the permit application process or absent in the existing permit. Change in sludge use or disposal practice may be cause for modification of the permit in accordance with 40 CFR 122.62(a)(1).

g. Pollutant Limits For Sewage Sludge Applied To Food Chain Crops

Only sewage sludge that meets the following minimum requirements shall be applied to land used for the production of food-chain crops.

1) Cadmium -

(i) The pH of the soil must be 6.5 or greater at the time of each application for sludge containing cadmium concentrations greater than 2 mg/kg (dry weight).

(ii) Annual application rate for cadmium in sewage sludge shall not exceed 0.5 kilograms per hectare.

(iii) Cumulative application rate of cadmium from sewage sludge for soils with a background pH of less than 6.5 shall not exceed 5 kg/ha, unless the sludge-soil mixture is adjusted to a pH of 6.5 or greater.

(iv) Cumulative application rate of cadmium from sewage sludge on soils with a background pH of greater than 6.5 shall not exceed the values listed in the table of Cumulative Metals Loadings in g.2), below.

2) Cumulative Metals Loadings

Sewage sludge from all sources applied to land shall not exceed the total amounts of cumulative metals loadings listed below.

Cumulative Metals Loadings (in kg/ha (lbs/acre))

	Soil Cation Exchange Capacity (meq/100 g)		
Metal	0-5	5-15	+15
Cadmium	5(4.4)	10(8.9)	20(17.8)
Copper	140(125)	280(250)	560(500)
Lead	560(500)	1120(1000)	2240(2000)
Nickel	140(125)	280(250)	560(500)
Zinc	280(250)	560(500)	1120(1000)

3) Polychlorinated Biphenyls (PCBs)

Sewage sludge used for producing animal feed (including pasture crops) shall be incorporated into the soil when PCB concentrations are equal to or greater than 10 mg/kg dry weight. Sewage sludge with PCB concentrations greater than or equal to 50 mg/kg dry weight shall not be land applied.

h. Pathogen Control

1) Sewage sludge or septic tank pumpings that are applied to the land surface or incorporated into the soil shall be treated by a Process to Significantly Reduce Pathogens (PSRP) prior to application. Processes to significantly reduce pathogens are aerobic digestion, air drying, anaerobic digestion, composting, lime stabilization and other approved methods as defined at 40 CFR 257, Appendix II. Public access to the facility shall be controlled for at least 12 months. Grazing by animals whose products are consumed by humans shall be prevented for at least one month.

k. Record Keeping

The permittee shall maintain the following sludge monitoring records for a period of at least 5 years from the date of the sample, measurement, report or application. These records shall be made available to the EPA and OSDH upon request.

1) Location of disposal site(s).

2) Date(s) of disposal at each site.

3) Identity of hauler(s) to each site.

4) Amount of sewage sludge disposed dry weight (kg/ha) or (lbs/acre) at each site, both annual and cumulative loadings.

5) Method of final disposal on each site.

6) A detailed description of all treatment processes including information such as residence time, temperature, and volatile solids reduction used to achieve PSRP and/or PFRP, or any other data which is necessary to demonstrate the pathogen reduction level of sludge.

7) Change in the usage of land to which sewage sludge has been applied, including type of crop grown.

8) Measurements of pH and Cation Exchange Capacity for each soil, and sewage sludge tested as required in 18.i., above.

9) Annual and cumulative loadings of metals applied in kg/ha or (lbs/acre) for each site.

10) Results of the Toxicity Characteristic Leaching Procedure required in 18.d., above.

19. Chronic Biomonitoring Requirements

a. The provisions of this section apply to Outfall(s) 001.

b. The permittee shall test the effluent for toxicity in accordance with the provisions in this section. Such testing will determine if an appropriately dilute effluent sample affects the survival and/or reproduction or growth of the appropriate test organism.

Toxicity is herein defined as a statistically significant difference at the 95% confidence level between survival and/or reproduction or growth of the appropriate test organism in a specified effluent dilution and the control (0% effluent).

Lethality, a component of toxicity, is herein defined as a statistically significant difference at the 95% confidence level between survival of the appropriate test organism in a specified effluent dilution and the control (0% effluent).

Significant non-lethal effect, a component of toxicity, is herein defined as a statistically significant difference at the 95% confidence level between reproduction or growth of the appropriate test organism in a specified effluent dilution and the control (0% effluent).

The permittee shall initiate the following series of tests within 60 days of the effective date of this permit. All test organisms, procedures, and water quality assurance criterion used shall be in accordance with the latest revision of "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms", EPA/600/4-89/001, or the most recent update thereof. The following tests shall be used:

1) Chronic static renewal 7-day survival and reproduction test using Ceriodaphnia dubia (Method 1002.0). This test may be extended beyond 7 days until 60% of the females in the control produce three broods.

2) Chronic static renewal 7-day larval survival and growth test using fathead minnow (Pimephales promelas) (Method 1000.0)

c. Five dilutions, in addition to an appropriate control (0% effluent), shall be used in the toxicity tests. These additional effluent concentrations shall be 32%, 42%, 56%, 75% and 100%. The low-flow effluent concentration (critical dilution) is defined as 100% effluent; there is no 1/2 low-flow effluent concentration.

d. The samples shall be collected at a point following the last treatment unit. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge.

If the receiving water is unsatisfactory as a result of preexisting instream toxicity (fails to fulfill the acceptance criteria of subsection 19.k below), the permittee shall substitute synthetic dilution water for receiving water in the retest required in subsection 19.k below, provided the following stipulations are met:

(1) a synthetic dilution water control was run, in addition to the receiving water control;

(2) the synthetic dilution water fulfills the requirements of subsection 19.~~j~~ h

(3) the permittee submits all test results on the receiving water with the report and information required by subsection 19.~~i~~ j below and the Discharge Monitoring Report (DMR) for the reporting period; and

(4) the synthetic dilution water must have pH, hardness, and alkalinity similar to that of the receiving water. Synthetic dilution water may be used exclusively for the control in all subsequent tests provided all of the above stipulations are met.

e. Flow-weighted 24-hour composite samples representative of dry weather flows during normal operation will be collected from Outfall(s) 001 The 24-hour composite sample consists of a minimum of 12 effluent portions collected at equal time intervals and combined proportional to flow or a sample continuously collected proportional to flow over a 24-hour operating day.

A minimum of three 24-hour composite samples must be collected so that the maximum holding time for any effluent sample shall not exceed 72 hours. The toxicity test must be initiated within 36 hours after collection of the last portion of the first 24-hour composite sample. Samples shall be chilled to 4 degrees Centigrade when collected, shipped and/or stored.

f. The toxicity tests specified above shall be conducted once per quarter.

g. Lethality Testing-Special Conditions

1) If any toxicity test at the 100% (LOW FLOW) effluent concentration demonstrates lethality, the permittee shall resample and again conduct the toxicity test(s) for the species that showed lethality within fifteen (15) days. There shall be a total of three (3) consecutive toxicity tests during a forty-five (45) day period. If one or more of the retests show lethality at the 100% (LOW FLOW) effluent concentration, the permittee may suspend additional retesting for this reporting period if written notification is sent to EPA Region 6 and OSDH, and all test results are submitted within fifteen (15) days.

2) If the testing frequency in subsection 19.f above is monthly, the permittee may substitute the retest for the next monthly routine toxicity test if the time of the retest coincides with the next monthly toxicity test. Concurrently with the retest, the permittee must also conduct the next month's required toxicity test for the species that did not demonstrate significant lethality at the 100% (LOW FLOW) effluent concentration.

3) If the monitoring frequency specified in subsection 19.f above, is biannual and if any toxicity test at the 100% (LOW FLOW) effluent concentration demonstrates lethality, the permittee shall resample and again conduct the toxicity test(s) for the species that showed lethality within thirty (30) days. There shall be a total of two (2) consecutive toxicity tests during the following ninety (90) days. The first of these tests shall be conducted with the first 30 days of the 90-day period.

4) After notification by the permitting authority, subsequent to the submission of any retest which demonstrates toxicity, the permittee may be required to submit to the EPA and OSDH an approvable proposal for conducting a Toxicity Reduction Evaluation (TRE). A TRE proposal would specify the approach and methodology to be used in performing a TRE and the date on which the permittee would initiate the TRE.

h. Test Acceptance

1) The toxicity test control (0% effluent) must have a survival equal to or greater than 80% to be considered as valid. Should the control survival be less than 80%, the toxicity test, including control and all effluent dilutions shall be repeated.

2) The mean number of Ceriodaphnia neonates produced per female in the control (0% effluent) must be 15 or more. Should the control neonate production be less than 15, the toxicity test, including control and all effluent dilutions shall be repeated.

3) The minimum growth of fathead minnow larvae at the end of the 7 days in the control (0% effluent) must be 0.25 mg per larvae or greater. Should the larval growth be less than 0.25 mg per larvae, that test, control and effluent, shall be repeated.

4) The percent coefficient of variation shall be 40% or less for the control (0% effluent), low flow dilution and 1/2 low flow dilutions. Should the percent coefficient of variation be greater than 40%, the toxicity test, including control and all effluent dilutions shall be repeated. If significant lethality was shown at the low flow effluent dilution, this coefficient of variation requirement shall not apply.

i. If the toxicity tests for an organism do not indicate toxicity and/or lethality at the 100% (LOW FLOW) effluent concentration during the first year, the permittee shall certify this information in writing to EPA Region 6 and OSDH and the biomonitoring requirements for that organism shall expire.

j. The permittee shall prepare a full report of the results according to the Report Preparation Section of "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms." The full report must be submitted with the first DMR containing these biomonitoring results. The permittee shall submit the toxicity testing information contained in Table 1 of this permit to EPA and OSDH along with the DMR submitted for the end of the reporting period following the toxicity test.

k. This permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity. Accelerated or intensified toxicity testing or Toxicity Reduction Evaluation (TRE) may be required in accordance with Section 308 of the Clean Water Act.

20. Pollution Prevention Requirements

a. The permittee shall institute or continue programs directed towards pollution prevention. Publicly Owned Treatment Works shall institute or continue programs to improve the operating efficiency and extend the useful life of the facility. The permittee will, at a minimum, submit an annual Environmental Audit Report by April 1, in accordance with Region 6 guidance. the reporting period shall cover the period from January 1 to December 31, of the preceding year. This report will discuss, at a minimum, the following items:

1) The influent loadings, flow and design capacity;

2) The effluent quality and plant performance;

3) The age of the wastewater treatment facility;

4) Bypassing from the tributary sewerage system(s);

5) The ultimate disposition of the sewage sludge;

6) Landfilling of sewage sludge and potential alternatives (if applicable);

7) New developments at the facility;

8) Operator certification and training;

9) The financial status of the facility; and

10) A subjective evaluation of conditions at the facility.

b. A resolution from the permittee's governing body shall accompany the Environmental Audit Report. This resolution shall include, at a minimum, the following:

1) An acknowledgement that the governing body has reviewed the Environmental Audit Report.

2) A description of actions that the permittee will take to maintain compliance with permit conditions.

c. The Environmental Audit Report and the governing body's resolution must be signed by a duly authorized representative of the permittee and shall be submitted to:

Environmental Protection Agency
Attention: 6W-EA
1445 Ross Avenue
Dallas, Texas 75202-2733

and to:

Oklahoma State Department of Health
Water Quality Service - 0207
1000 N.E. Tenth Street
Oklahoma City, OK 73117-1299

For
Environmental Protection Agency

Myron O. Knudson, P.E.
Director
Water Management Division (6W)

For
Oklahoma State Department of Health

George McBryde, P.E., Chief Engineer
Water Quality Service

Mark S. Coleman, Deputy Commissioner
for Environmental Health Services

TABLE I (Sheet 1 of 5)

Permittee: Tahlequah Public Works Authority
NPDES Permit: OK0026964
Outfall: 001

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION

Date Composites Collected:

No. 1: From _____ To _____
No. 2: From _____ To _____
No. 3: From _____ To _____

Test initiated: _____ am/pm _____ date

Dilution water used: _____ Receiving water _____ Reconstituted water

NUMBER OF YOUNG PRODUCED PER FEMALE @ 7 DAYS

Percent effluent (%)

REP	0%	Dil.1 32%	Dil.2 42%	Dil.3 56%	Dil.4 75%	Dil.5 100%
A						
B						
C						
D						
E						
F						
G						
H						
I						
J						
CV*						

*Coefficient of variation = standard deviation x 100/mean

TABLE I (Sheet 2 of 5)

Permittee: Tahlequah Public Works Authority
NPDES Permit: OK0026964
Outfall: 001

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test as appropriate:

Is the mean number of young produced per female significantly less (p=0.05) than the control's number of young per female for the Low-Flow or Critical Dilution (100%)? _____Yes _____No

If you report No, enter a 0 on the DMR Form, Parameter No. TEP3B. Otherwise enter a 1.

PERCENT SURVIVAL

Percent Effluent (%)

Time of Reading	0%	Dil.1 32%	Dil.2 42%	Dil.3 56%	Dil.4 75%	Dil.5 100%
24 hr.						
48 hr.						
7 day						

2. Fisher's Exact Test - Low Flow Lethality

Is the mean survival at 7 days significantly less (p=0.05) than the control survival for the Low-Flow or Critical Dilution (100%)?
_____Yes _____No

If you report No, enter a 0 on the DMR Form, Parameter No. TLP3B. Otherwise enter a 1.

3. Enter percent effluent corresponding to each NOEL (no observed effect level) for Ceriodaphnia below and circle the lowest number:

a. NOEL survival = _____% effluent

b. NOEL reproduction = _____% effluent

TABLE I (Sheet 3 of 5)

Permittee: Tahlequah Public Works Authority
NPDES Permit: OK0026964
Outfall: 001

FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL
(Pimephales promelas)

Date Composites Collected:

No. 1: FROM:_____ TO: _____
No. 2: FROM:_____ TO: _____
No. 3: FROM:_____ TO: _____

Test initiated: _____ am/pm _____date

Dilution water used: _____ Receiving water _____ Reconstituted water

DATA TABLE FOR GROWTH OF FATHEAD MINNOWS

Effluent Concent. Percent	Average Dry Weight in milligrams in replicate chambers A	B	C	D	MEAN DRY WEIGHT (mg)	CV%*
0%						
Dil.1 32%						
Dil.2 42%						
Dil.3 56%						
Dil.4 75%						
Dil.5 100%						

* coefficient of variation = standard deviation x 100/mean

TABLE I (Sheet 4 of 5)

Permittee: Tahlequah Public Works Authority
NPDES Permit: OK0026964
Outfall: 001

4. Dunnett's Procedure:

Is the mean dry weight (growth) at 7 days effluent significantly less (p=0.05) than the control's dry weight (growth) for the Low Flow or Critical Dilution (100%)? _____Yes _____No

If you report No, enter a 0 on the DMR Form, Parameter No. TEP6C. Otherwise enter a 1.

FATHEAD MINNOW GROWTH AND SURVIVAL TEST

DATA TABLE FOR FATHEAD MINNOW SURVIVAL

Effluent Concent. Percent	Percent Survival in Replicate Chambers				Mean Percent Survival		CV%*
	A	B	C	D	24h	48h	7days
0%							
Dil.1 32%							
Dil.2 42%							
Dil.3 56%							
Dil.4 75%							
Dil.5 100%							

* coefficient of variation = standard deviation x 100/mean

TABLE I (Sheet 5 of 5)

Permittee: Tahlequah Public Works Authority
NPDES Permit: OK0026964
Outfall: 001

5. Dunnett's Procedure or Steel's Many-One Rank Test as appropriate - Low Flow Lethality

Is the mean survival at 7 days significantly less (p=0.05) than the control survival for the Low Flow or Critical Dilution (100%)? _____Yes _____No

If you report No, enter a 0 on the DMR Form, Parameter No. TLP6C. Otherwise enter a 1.

6. Enter percent effluent corresponding to each NOEL (no observed effect level) for fathead minnow below and circle lowest number:

a. NOEL survival = _____% effluent

b. NOEL growth = _____% effluent

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FILE: / CLIP: 3
S-21702

PERMIT NO. OK0028126
Page 1 of Part I
Date of Issuance: 1-10-00

AUTHORIZATION TO DISCHARGE UNDER THE
OKLAHOMA POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

In compliance with the Oklahoma Pollutant Discharge Elimination System Act (OPDES Act), Title 27A O.S. 1998, § 2-6-201 *et seq.*, and the rules of the State of Oklahoma Department of Environmental Quality (DEQ) adopted thereunder {See OAC 252:605}; the Federal Clean Water Act, Public Law 95-217 (33 U.S.C. 1251 *et seq.*), Section 402; and NPDES Regulations (40 CFR Parts 122, 124 and 403),

Westville Utility Authority
(State ID# S-21702)
P.O. Box 117
Westville, Oklahoma 74965

is hereby authorized to discharge treated wastewater from a facility located at approximately

E½ of the W½ of the SE¼ of Section 07,
Township 17 North, Range 26 East, Indian Meridian,
Adair County, State of Oklahoma

to receiving waters: Shell Branch to Barren Fork to Lake Tenkiller

Latitude: 35°-57'-39" N
Longitude: 94°-34'-23" W
Planning Segment No. 121700

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II, III and IV hereof.

This permit replaces and/or supersedes the permit issued on July 16, 1991.

This permit shall become effective February 1, 2000.

This permit and authorization to discharge shall expire at midnight, January 31, 2005.

For the Oklahoma Department of Environmental Quality:

Quang Pham

Quang Pham, P.E., Chief, PDES Permitting Section
Water Quality Division

Jon L Craig

Jon L. Craig, Director
Water Quality Division

A. Effluent Limitations and Monitoring Requirements

During the periods stipulated, the permittee is authorized to discharge treated wastewater in accordance with the following limitations:

1. Interim Conventional and Nonconventional Pollutants

Effective on the effective date of the permit through March 31, 2001.

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Measurement Frequency	Sample Type
	Monthly Average	Monthly Average	Weekly Average		
Biochemical Oxygen Demand -5 Day (BOD_5)	35.0	30	45	2/month	Grab
Total Suspended Solids (TSS)	105.1	90	145	2/month	Grab

There shall be no discharge of floating solids or visible foam in other than trace amounts.
The pH shall not be less than 6.5 standard units nor greater than 9.0 standard units at any time and shall be monitored by grab sample collected twice per week.
Samples taken in compliance with the monitoring requirements specified in the permit shall be taken at the discharge from the final treatment unit.
Flow (measured in million gallons per day) shall be monitored five times per week by instantaneous measurement and reported as a 30-day average and a daily maximum.
All monitoring and reporting requirements shall also be in compliance with Section III.B. of this permit.

2. Final Conventional and Nonconventional Pollutants

Effective on April 1, 2001, through the expiration date of the permit.

i. Spring Limitations (April 1 through May 31)

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Measurement Frequency	Sample Type
	Monthly Average	Monthly Average	Weekly Average		
Carbonaceous Biochemical Oxygen Demand -5 Day ($CBOD_5$)	28.0	12	18	2/month	Grab
Total Suspended Solids (TSS)	70.1	30	45	2/month	Grab
Ammonia (NH_3-N)	9.3	4	6	2/month	Grab
Dissolved Oxygen (DO)	N/A	Minimum: 6 mg/l		2/month	Grab
Phosphorus (P)	4.7	2	3	2/month	Grab
Fecal Coliform [a]	N/A	Report [b]	Report [b]	2/month	Grab

ii. Summer Limitations (June 1 through October 31)

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Measurement Frequency	Sample Type
	Monthly Average	Monthly Average	Weekly Average		
Carbonaceous Biochemical Oxygen Demand -5 Day ($CBOD_5$)	23.4	10	15	2/month	Grab
Total Suspended Solids (TSS)	35.0	15	22.5	2/month	Grab
Ammonia (NH_3-N)	9.3	4	6	2/month	Grab
Dissolved Oxygen (DO)	N/A	Minimum: 5 mg/l		2/month	Grab
Phosphorus (P)	4.7	2	3	2/month	Grab
Fecal Coliform[a]	N/A	Report [b]	Report [b]	2/month	Grab

iii. Winter Limitations (November 1 through March 31)

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Measurement Frequency	Sample Type
	Monthly Average	Monthly Average	Weekly Average		
Carbonaceous Biochemical Oxygen Demand -5 Day ($CBOD_5$)	30.4	13	19.5	2/month	Grab
Total Suspended Solids (TSS)	70.1	30	45	2/month	Grab
Ammonia (NH_3-N)	17.5	7.5	11.5	2/month	Grab
Dissolved Oxygen (DO)	N/A	Minimum: 4 mg/l		2/month	Grab
Phosphorus (P)	4.7	2	3	2/month	Grab
Fecal Coliform[a]	N/A	Report [b]	Report [b]	2/month	Grab

[a] Coliforms are measured in organisms/100 ml.
[b] The permit shall monitor fecal coliform only for the first year after the proposed facility goes into operation. Then the permit will be reopened to re-evaluate the need for fecal coliform limits.

iv. Year-round Requirements

There shall be no discharge of floating solids or visible foam in other than trace amounts.
The pH shall not be less than 6.5 standard units nor greater than 9.0 standard units at any time and shall be monitored by grab sample collected daily.
Samples taken in compliance with the monitoring requirements specified in the permit shall be taken at the discharge from the final treatment unit.
Flow (measured in million gallons per day) shall be monitored daily by instantaneous measurement and reported as a 30-day average and a daily maximum.
All monitoring and reporting requirements shall also be in compliance with Section III.B. of this permit.

3. Reopener Clause for Fecal Coliform

Based upon the submitted monitoring results for fecal coliform bacteria, the permit will be reopened for modification or revocation and reissuance to re-evaluate the need for fecal coliform limits.

B. Schedule of Compliance

1. The permittee shall achieve compliance with final effluent limitations specified in accordance with the following schedule:

a.	Submit approvable plans and specifications for the proposed facility/modification detailed in the engineering report	February 1, 2000
b.	Begin construction	September 1, 2000
c.	Complete construction	March 1, 2001
d.	Attain compliance with final limits	April 1, 2001

e. The permittee shall submit a progress report to the DEQ outlining the status of all facility improvements during the months of January, April, July, and October of each year until the construction is complete. The first report shall be due during the first designated month after the permit become effective.

2. Where percent project completion is less than would be required to assure completion of construction by the required date, the Progress Report shall also include an explanation for this delay and proposed remedial actions.

3. No later than 14 calendar days following date for a specific action (as opposed to a Progress Report) identified in the above schedule of compliance, the permittee shall submit a written notice of compliance or noncompliance.

4. The DEQ may, upon request of the permittee, and after public notice, revise or modify a schedule of compliance in an issued permit if they determine good and valid cause (such as an act of God, strike, flood, materials shortage, or other event over which the permittee has little or no control) exists for such revision.

C. **Sanitary Sewer Overflows**

Any bypass in the collection system [sanitary sewer overflow (SSO)] shall be reported in accordance with Part III.B.6. of this permit.

PART II. OTHER PERMIT REQUIREMENTS

A. Contributing Industries and Pretreatment Requirements

1. The following pollutants may not be introduced into the treatment facility:

   a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;

   b. Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the works are specifically designed to accommodate such discharges;

   c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in interference;

   d. Any pollutant, including oxygen demanding pollutants (e.g., BOD), released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the POTW;

   e. Heat in amounts which will inhibit biological activity in the POTW resulting in interference but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40 degrees Centigrade (104 degrees Fahrenheit) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits;

   f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;

   g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and

   h. Any trucked or hauled pollutants, except at discharge points designated by the POTW.

2. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Act, including any requirements established under 40 CFR Part 403.

3. The permittee shall provide adequate notice of the following:

   a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Act if it were directly discharging those pollutants; and

b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

Any notice shall include information on (i) the quality and quantity of effluent to be introduced into the treatment works, and (ii) any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

B. Sewage Sludge Requirements

1. Sewage sludge disposal practices shall comply with the federal regulations for landfills, sludge, and solid waste disposal established at 40 CFR Part 257, 503 and DEQ rules governing Sludge Management (OAC 252:647). Sewage sludge disposal shall also comply with the requirements of Sludge Management Plan number 3501001 approved by the DEQ on September 17, 1993, which provides for land application of sludge in the W ½ of the NW¼ of the NE¼ of Section 19, Township 18 North, Range 26 East, I.M., Adair County, State of Oklahoma.

2. The permittee shall notify the DEQ 120 days prior to implementing any changes to the approved sewage sludge management plan.

3. If an applicable "acceptable management practice" or numerical limitation for pollutants in sewage sludge promulgated at Section 405(d)(2) of the Clean Water Act is more stringent than the sludge pollutant limit or acceptable management practice in this permit, or controls a pollutant not listed in this permit, this permit may be modified or revoked and reissued to conform to the requirements promulgated at Section 405(d)(2).

4. In addition, the permittee shall also comply with all applicable sewage sludge requirements in part IV of this permit.

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AUTHORIZATION TO DISCHARGE UNDER THE OKLAHOMA POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the Oklahoma Pollutant Discharge Elimination System Act (OPDES Act), Title 27A O.S., § 2-6-201 *et seq.*, and the rules of the State of Oklahoma Department of Environmental Quality (DEQ) adopted thereunder {See OAC 252:605, OAC 310:385, and OAC 785:40}; the Federal Clean Water Act, Public Law 95-217 (33 U.S.C. 1251 *et seq.*), Section 402; and NPDES Regulations (40 CFR Parts 122, 124 and 403),

Stilwell Area Development Authority
(State ID# S-21703)
P.O. Box 1512
Stilwell, Oklahoma 74960

is hereby authorized to discharge treated wastewater from a facility located at approximately

NE/4 of the SE/4 of the NW/4 of Section 34,
Township 16 North, Range 25 East, Indian Meridian,
Adair County, State of Oklahoma

to receiving waters: Caney Creek

At a point located approximately NW/4 of the NE/4 of the NW/4 of Section 34, T16N, R25E of the Indian Meridian, Adair County, Oklahoma

Latitude: 35° 82' 01.72" N [GPS: NAD-27 CONUS]
Longitude: 94° 64' 20.90" W [GPS: NAD-27 CONUS]
Planning Segment No. 121700 (Waterbody ID# 121700040010)

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II, III and IV hereof.

This permit replaces and/or supersedes the permit No. OK0030341 issued on October 30, 1992 by DEQ, and permit No. OK0034088 issued by EPA, on September 25, 1987.

The issuance date of this permit is May 24, 2002.

This permit shall become effective June 1, 2002.

This permit and authorization to discharge shall expire at midnight May 31, 2007.

For Oklahoma Department of Environmental Quality

Quang Pham, P.E., Manager
Wastewater Discharge Permit Section

Jon L. Craig, Director
Water Quality Division

SECTION A. Effluent Limitations and Monitoring Requirements

During the period beginning the effective date and lasting through date of expiration, the permittee is authorized to discharge treated wastewater in accordance with the following limitations:

1. Conventional and Nonconventional Pollutants

a. **Spring Limitations (April 1– May 31)**

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Average	Monthly Average	Weekly Average		
Carbonaceous Biochemical Oxygen Demand - 5 Day ($CBOD_5$) [STORET: 80082]	187.7	15	22.5	1/week	6 hr comp
Total Suspended Solids (TSS) [STORET: 00530]	375.3	30	45	1/week	6 hr comp
Ammonia [STORET 00610]	51.3 [c]	4.1 [c]	9.9 [c] (Daily Max)	3/week [d]	6-hr comp
Dissolved Oxygen (DO) [STORET: 00300]	N/A	Minimum: 7 mg/l		Daily	Grab
Total Phosphorus (P) [STORET: 00665]	25.0	2	3	1/Week	6 hr comp
Fecal Coliform [a] (May) [STORET: 74055]	N/A	200/100	400/100	1/week	Grab
Total Chlorine Residual (TCR) (May) [STORET: 50060]	measurable[b]			Daily	Grab

[a] Coliforms are measured in organisms/100 ml.

[b] No Measurable is defined as less than 0.1 mg/l.

[c] Ammonia concentration and loading limits are toxicity-based. The DO-based monthly average ammonia concentration limit demonstrates potential to exceed a maximum concentration of 6 mg/l at the edge of the chronic mixing zone. Where toxicity-based limits are required, a daily maximum concentration limit is established for municipal POTWs instead of a weekly average limit.

d If the highest daily maximum ammonia level reported during this season for the first year after the ffective date of these limits is less than or equal to 1.5 times the monthly average limit (i.e., 1.5 × 4.1 = 6.15 mg/l), the monitoring frequency may be reduced to 1/week for that season. Otherwise, the monitoring frequency continues at 3/week for that season for the remaining term of the permit.

b. **Summer Limitations (Junel – October 31)**

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Average	Monthly Average	Weekly Average		
Carbonaceous Biochemical Oxygen Demand - 5 Day ($CBOD_5$) [STORET: 80082]	125.1	10	15	1/week	6 hr comp
Total Suspended Solids (TSS) [STORET: 00530]	187.7	15	22.5	1/week	6 hr comp
Ammonia [STORET 00610]	37.5	3	4.5	1/week	6-hr comp
Dissolved Oxygen (DO) [STORET: 00300]	N/A	Minimum: 6 mg/l		Daily	Grab
Total Phosphorus (P) [STORET: 00665]	25.0	2	3	1/week	6 hr comp
Fecal Coliform [a] (June - Sept.) [STORET: 74055]	N/A	200/100	400/100	1/week	Grab
Total Chlorine Residual (TCR) (June-Sept.) [STORET: 50060]	measurable [b]			Daily	Grab

[a] Coliforms are measured in organisms/100 ml.

[b] No Measurable is defined as less than 0.1 mg/l.

c. **Winter Limitations (November 1– March 31)**

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Average	Monthly Average	Weekly Average		
Carbonaceous Biochemical Oxygen Demand - 5 Day ($CBOD_5$) [STORET: 80082]	225.2	18	27	1/week	6 hr comp
Total Suspended Solids (TSS) [STORET: 0 0530]	375.3	30	45	1/week	6 hr comp
Ammonia* [STORET 00610]	51.3 [c]	4.1 [c]	9.9 [c] (daily max)	3/week [d]	6-hr comp
Dissolved Oxygen (DO) [STORET: 00300]	N/A	Minimum: 7 mg/l		Daily	Grab
Total Phosphorus (P) [STORET: 00665]	25.0	2	3	1/week	6 hr comp

* Ammonia limits for winter months will be effective 3 years from the effective date of the permit; monitoring and reporting shall be performed starting the effective date of the permit.

[c] Ammonia concentration and loading limits are toxicity-based. Where toxicity-based limits are required, a daily maximum concentration limit is established for municipal POTWs instead of a weekly average limit.

[d] If the highest daily maximum ammonia level reported during this season for the first year after the effective date of these limits is less than or equal to 1.5 times the monthly average limit (i.e., $1.5 \times 4.1 = 6.15$ mg/l), the monitoring frequency may be reduced to 1/week for that season. Otherwise, the monitoring frequency continues at 3/week for that season for the remaining term of the permit.

d. **Year-round Requirements**

There shall be no discharge of floating solids or visible foam in other than trace amounts.

The pH [STORET:00400] shall not be less than 6.1 standard units nor greater than 9.0 standard units and shall be monitored by grab samples collected daily.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge from the final treatment unit.

Flow [STORET:50050] (measured in million gallons per day) shall be monitored daily by totalized measurement and reported as a 30-day average and a daily maximum.

2. Whole Effluent Toxicity Testing

Final Effluent Reporting and Monitoring Requirements (Outfall TX1)

During the period beginning the effective date of the permit and lasting through the expiration date, the permittee is authorized to discharge from Outfall TX1 (functionally identical to Outfall 001). The discharge consists of biologically treated sanitary wastewater. Such discharges shall be limited and monitored by the permittee as specified below:

Whole Effluent Toxicity Reporting and Monitoring Requirements (Outfall TX1)

Effluent Characteristic					Reporting Requirements [a]		Monitoring Requirements	
	Test	Critical Dilution	Season	Parameter	30-day Avg Min	7-day Min	Testing Frequency [b]	Sample Type
Routine Testing	*Ceriodaphnia dubia*, 7-day chronic NOEC static renewal, freshwater	100%	Yearound	Pass/Fail Survival [TLP3B]	---	Report	1/quarter [c]	24-hr comp
				$NOEC_L$ Survival [TOP3B]	Report	Report		
				% Mortality at Critical Dilution [TJP3B]	Report	Report		
				Pass/Fail Reproduction [TGP3B]	---	Report		
				$NOEC_S$ Reproduction [TPP3B]	Report	Report		
				% Coeff of Variation [TQP3B]	Report	Report		
	Pimephales promelas (Fathead minnow), 7-day chronic NOEC static renewal, freshwater	100%	Apr 1 through Sep 30	Pass/Fail Survival [TLP6C]	---	Report	1/quarter [c]	24-hr comp
				$NOEC_L$ Survival [TOP6C]	Report	Report		
				% Mortality at Critical Dilution [TJP6C]	Report	Report		
				Pass/Fail Growth [TGP6C]	---	Report		
				$NOEC_S$ Growth [TPP6C]	Report	Report		
				% Coeff of Variation [TQP6C]	Report	Report		
			Oct 1 through Mar 31	Pass/Fail Survival [TLP6C]	---	Report	1/2 months first 2 years, quarterly thereafter [c]	24-hr comp
				$NOEC_L$ Survival [TOP6C]	Report	Report		
				% Mortality at Critical Dilution [TJP6C]	Report	Report		
				Pass/Fail Growth [TGP6C]	---	Report		
				$NOEC_S$ Growth [TPP6C]	Report	Report		
				% Coeff of Variation [TQP6C]	Report	Report		
Retesting	Retest #1 [22415] [d]				---	Report	As required [e]	24-hr comp
	Retest #2 [22416] [d]				---	Report		

[b] See provision for monitoring frequency reduction after first two years (Part II, Section A, Item 5).

[c] For first two years of permit, a valid WET test shall be reported for each species for each of the following reporting periods: Apr 1 – Jun 30, Jul 1 – Sep 30, Oct 1 – Nov 30, Dec 1 – Jan 31, and Feb 1 – March 31. After first two years of permit, a valid WET test shall be reported for each species for each calendar quarter. Results of retests conducted pursuant to prior test failure shall not be submitted on DMRs in lieu of routine test results (see Part II, Section A, Item 2.a).

[d] Applies to either or both test species, according to results of test failure triggering monthly retests.

[e] Monthly retesting required only if routine test for reporting period (for either species) fails.

Whole effluent toxicity reporting and monitoring requirements apply beginning the effective date of the permit.

WET testing summary reports: Reports of all WET testing initiated, regardless of whether such tests are carried to completion, shall follow the requirements of Part II, Section A, Item 4.

Whole effluent toxicity concurrent testing provision: Concurrent analysis of total ammonia and pH is required on all effluent samples, including static renewals, collected for Fathead minnow WET testing or retesting. Reporting of results shall be in accordance with the following requirements.

Concurrent Effluent Testing - Reporting Requirements

Effluent Characteristic	Concentration [a]		
	Daily Min	Monthly Avg	Daily Max
Ammonia, total [STORET 00610]	Report [b]	Report [b]	Report [b]
pH (std units) [STORET 00400]	Report [b]	---	Report [b]

[a] Concentration units are mg/l unless otherwise specified.
[b] Report only those effluent samples collected for Fathead minnow WET testing.

Concurrent Effluent Testing - Monitoring Requirements

Effluent Characteristic	Applicable Season	Monitoring Requirements	
		Monitoring Frequency [a]	Sample Type
Ammonia, total	Apr 1 – Sep 30	1/quarter	24 hr composite
	Oct 1 – Mar 31	1/2 months first 2 years, quarterly thereafter	
pH	Apr 1 – Sep 30	1/quarter	Measured in each composite effluent sample, including static renewals, just prior to first use
	Oct 1 – Mar 31	1/2 months first 2 years, quarterly thereafter	

[a] See provision for WET testing monitoring frequency reduction after first two years (Part II, Section A, Item 5).

SECTION B. Sanitary Sewer Overflows

Any bypass in the collection system [sanitary sewer overflow (SSO)] shall be reported in accordance with Part III.B.6. of this permit.

In addition, all reports shall be summarized and reported in tabular format with the Discharge Monitoring report (DMR) for the month in which the bypasses occurred.

PART II. OTHER PERMIT REQUIREMENTS

A. WHOLE EFFLUENT TOXICITY TESTING (7-DAY CHRONIC NOEC, STATIC RENEWAL, FRESHWATER)

1. SCOPE AND METHODOLOGY

a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section. Applicability to multiple outfalls is described in Item 3.d.5 of this section. The permittee shall biomonitor for *Ceriodaphnia dubia* and *Pimephales promelas* in accordance with the WET testing frequencies prescribed in Part I. Intervals between test initiation dates shall be a function of the required testing frequency, as follows:

- Monthly retests: No less than 20 days and no more than 40 days.
- Bimonthly: No less than 40 days and no more than 80 days.
- Quarterly: No less than 2 months and no more than 4 months.
- Semi-annually: No less than 4 months and no more than 8 months.

Provisions for performance-based monitoring frequency reductions are contained in Item 5 of this section.

APPLICABLE TO OUTFALL(S):	001
REPORTED ON DMR AS OUTFALL(S):	TX1
CRITICAL DILUTION:	100%
EFFLUENT DILUTION SERIES (ALL TESTS):	32%, 42%, 56%, 75%, 100%
COMPOSITE SAMPLE TYPE:	Defined at Part I
TEST SPECIES/METHODS:	40 CFR 136

Ceriodaphnia dubia chronic static renewal 7-day survival and reproduction test, Method 1002.0, EPA/600/4-91/002 or the most recent update thereof. A minimum of ten (10) replicates consisting of one (1) organism each must be used in the control and in each effluent dilution of this test. This test should be terminated when 60% of the surviving females in the control produce three broods or at the end of eight days, whichever comes first. If these criteria are not met at the end of 8 days, the test must be repeated.

Pimephales promelas (Fathead minnow) chronic static renewal 7-day larval survival and growth test, Method 1000.0, EPA/600/4-91/002, or the most recent update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

b. CHRONIC LETHAL EFFECT TEST FAILURE

The $NOEC_L$ (No Observed Lethal Effect Concentration) is defined as the greatest effluent dilution at and below which lethality that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Chronic lethal test failure (chronic $NOEC_L$ test) is defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution.

c. CHRONIC SUBLETHAL EFFECT TEST FAILURE

The $NOEC_S$ (No Observed Sublethal Effect Concentration) is defined as the greatest effluent dilution at and below which sublethality (inhibited reproduction in the *Ceriodaphnia dubia* test or inhibited growth in the Fathead minnow test) that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Chronic sublethal test failure (chronic $NOEC_S$ test) is defined as a demonstration of a statistically significant sublethal effect at test completion to a test species at or below the critical dilution.

d. REOPENER CLAUSE

This permit may be reopened to require whole effluent toxicity limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

2. TESTING REQUIREMENTS DUE TO CHRONIC TEST FAILURE

Upon becoming aware of the failure of any test, the permittee shall notify the DEQ Water Quality Division Toxics Coordinator immediately, and in writing within 5 working days of the test failure with a summary of the results of and any other pertinent circumstances associated with the failed test.

a. Whenever there is a lethal effect test failure for either species during routine testing, the frequency of testing for the affected species shall automatically increase to, or continue at, as appropriate, the WET testing frequency prescribed in Part I for the remaining life of the permit. In addition, two (2) additional monthly tests (retests) of the affected species are required. The two additional tests shall be conducted monthly during the next two consecutive months. The permittee shall not substitute either of the two additional tests for routine toxicity testing. Additional tests are not required for a sublethal effect test failure. A full laboratory report for the failed routine test and both additional tests, if required, shall be prepared and submitted to the DEQ in accordance with procedures outlined in Item 4 of this section.

b. PERSISTENT LETHALITY

(1) If either of the two additional tests result in an $NOEC_L$ value less than the critical dilution, persistent lethality is exhibited, and the permittee shall initiate a Toxicity Reduction Evaluation (TRE) as specified in Item 6 of this section. The TRE initiation date will be the test completion date of the first failed retest.

(2) The retesting requirements in Item 2.a are suspended upon submittal of the TRE Action Plan.

c. INTERMITTENT LETHALITY

If both additional tests result in an $NOEC_L$ value greater than or equal to the critical dilution, persistent lethality is not exhibited. However, if any routine test lethal effect failure occurs within 18 months of a prior lethal effect test failure, intermittent lethality is exhibited, and the permittee may be required by the DEQ to initiate a TRE, as described in Item 6 of this section, based on the severity and pattern of such lethal effect over time.

d. PERSISTENT SUBLETHALITY

Barring persistent lethality, if two consecutive routine tests result in a sublethal effect failure for a species, persistent sublethality is exhibited, and the permittee:

(1) Shall increase the frequency of testing for the affected species to, or continue at, as appropriate, the WET testing frequency prescribed in Part I for the remaining life of the permit; and

(2) May be required by the DEQ to initiate a TRE, as described in Item 6 of this section, based on the severity and pattern of such sublethal effect over time.

3. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied, including the following additional criteria:

(1) The toxicity test control (0% effluent) must have survival equal to or greater than 80%.

(2) The mean number of *Ceriodaphnia dubia* neonates produced per surviving female in the control (0% effluent) must be 15 or more.

(3) Sixty (60) percent of the surviving *Ceriodaphnia dubia* control females must produce three broods.

(4) The mean dry weight of surviving Fathead minnow larvae at the end of the 7 days in the control (0% effluent) must be 0.25 mg per larva or greater.

(5) The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for the young of surviving females in the *Ceriodaphnia dubia* reproduction test and for the growth and survival endpoints of the Fathead minnow test.

(6) The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal or sublethal effects are exhibited for the young of surviving females in the *Ceriodaphnia dubia* reproduction test and for the growth and survival endpoints of the Fathead minnow test.

(7) As documented at test termination, no more than forty (40) percent of the *Ceriodaphnia dubia* test organisms in the control (0% effluent) or any effluent dilution shall be male.

Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40% in the critical dilution. A repeat test shall be conducted within the reporting period of any test determined to be invalid.

b. Statistical Interpretation

(1) For the *Ceriodaphnia dubia* survival test, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be Fisher's Exact Test as described in EPA/600/4-91/002, or the most recent update thereof.

(2) For the *Ceriodaphnia dubia* reproduction test and the Fathead minnow larval survival and growth test the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in EPA/600/4-91/002, or the most recent update thereof.

(3) If the conditions of test acceptability are met in Item 3.a above and the percent survival of the test organism is equal to or greater than 80% in the critical dilution concentration and all lower dilution concentrations, the test shall be considered to be a passing test, and the permittee shall report an $NOEC_L$ of not less than the critical dilution for the DMR reporting requirements found in Item 4 below.

c. Dilution Water

(1) Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness and alkalinity to the closest downstream perennial water where the toxicity test is conducted on an effluent discharge to a receiving stream classified as intermittent or to a receiving stream with no flow due to zero flow conditions.

(2) If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 3.a.), the permittee must submit the test results exhibiting receiving water toxicity with the full test report required in Item 4 below and may thereafter substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:

(a) a synthetic dilution water control which fulfills the test acceptance requirements of Item 3.a. was run concurrently with the receiving water control;

(b) the test indicating receiving water toxicity was carried out to completion; and

(c) the synthetic dilution water had a pH, hardness and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the

discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

d. Samples and Composites

(1) The permittee shall collect three flow-weighted 24-hour composite samples representative of the flows during normal operation from the outfall(s) listed at Item 1.a above. Unless otherwise specified in Part I of the permit, a 24-hour composite sample consists of a minimum of 12 effluent portions collected at equal time intervals representative of a 24-hour operating day and combined proportional to flow or a sample continuously collected proportional to flow over a 24-hour operating day.

(2) The first composite effluent sample shall be used to initiate each test and must be collected so that its holding time (between collection of the last portion of the sample and test initiation) does not exceed 36 hours. Collection of the second and third composite effluent samples must be timed so as to permit an approximately equal use distribution of the three composite samples for daily static renewals. In no case shall the holding time of the second and third composite samples (between collection of the last portion of the sample and its first use) exceed 72 hours. All samples shall be chilled to 4 °C during collection, shipping and/or storage.

(3) The permittee shall collect the 24-hour composite samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis.

(4) If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling period. However, the permittee must collect an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full test report required in Item 4 of this section.

(5) MULTIPLE OUTFALLS: If the provisions of this section are applicable to multiple outfalls, as specified in Part I of the permit, the permittee shall combine the composite effluent samples in proportion to the average flow from the outfalls listed in Item 1.a of this section for the day the sample was collected. The permittee shall perform the toxicity test on the flow-weighted composite of the outfall samples.

4. REPORTING

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this section in accordance with the Report Preparation Section of EPA/600/4-91/002, or the most current publication, for every valid or invalid toxicity test initiated, whether carried to completion or not. The permittee shall retain each full report pursuant to the records retention provisions of Part III of this permit. The permittee shall submit full test reports for all tests

initiated, regardless of whether the tests are carried to completion, to the DEQ no later than the 15th day of the month following completion of the test, including any test which is considered invalid, is terminated early for any reason, or which indicates receiving water toxicity.

b. A valid test for each species (excluding retests) must be reported on the DMR for each reporting period specified in Part I of this permit unless the permittee is performing a TRE, which may increase the frequency of testing and reporting. A DMR must be submitted by the 15th day of the month following-completion of any valid test. The full report for the test (see Item 4.a above) shall be submitted along with the DMR. If a survival test failure is experienced for either test species, two copies of the blank DMR for the applicable reporting period shall be made in advance of completing and submitting the DMR so that the DMR copies may be used to report results of the required retests. If more than one valid test (excluding retests) is performed on a species during a reporting period, the permittee shall report the lowest survival test results as the 7-day minimum for each species tested, and the arithmetic average of the results of the survival tests shall be reported as the 30-day average minimum. The sublethal test results reported for each species on the DMR are determined in the same manner. If the permittee performs only one valid test (excluding retests) on a species during the reporting period, then the results of that test shall be reported as both the 7-day minimum and the 30-day average minimum on the DMR. The 30-day average minimum does not apply to the pass/fail parameters (TLP3B, TGP3B, TLP6C and TGP6C) in Item 4.c below.

If any test results in anomalous $NOEC_L$ or $NOEC_S$ findings (i.e., it indicates an interrupted dose response across the dilution series), the DEQ recommends that the permittee contact its DEQ toxicity coordinator for a technical review of the test results prior to submitting the full test report and DMR. A summary of all tests initiated during the reporting period, including invalid tests, repeat tests and retests, shall be attached to the reporting period DMR for DEQ review. A test is a REPEAT test if it is performed as a result of a previously invalid test. A test is a RETEST if it is performed as a result of a previously failed test.

(1) The reporting period test summary attached to the DMR shall be organized as follows:

(a) Invalid tests (basis for test invalidity must be described)

(b) Valid tests (other than retests) initiated during current reporting period

(c) Valid retests for tests failed during previous reporting period (if not submitted in the previous reporting period test summary)

(d) Valid retests for tests failed during current reporting period

(2) The following information shall be listed in the reporting period test summary for each valid test in categories (b) through (d) in Item 4.b(1) above:

(a) Test species

(b) Date of test initiation at laboratory

(c) Results of all concurrent effluent analyses specified in Part I of this permit

(d) All test result parameters for the test species specified in Item 4.c below.

c. The permittee shall report the following results for all VALID toxicity tests (excluding retests) on the DMR(s) for that reporting period in accordance with Item 4.b above and Part III of this permit.

(1) *Ceriodaphnia dubia*

(a) Parameter TLP3B: If the *Ceriodaphnia dubia* $NOEC_L$ for survival is less than the critical dilution, report a "1"; otherwise, report a "0".

(b) Parameter TOP3B: Report the *Ceriodaphnia dubia* $NOEC_L$ value for survival.

(c) Parameter TJP3B: Report the *Ceriodaphnia dubia* percent mortality in the critical dilution at test completion.

(d) Parameter TGP3B: If the *Ceriodaphnia dubia* $NOEC_S$ for reproduction is less than the critical dilution, report a "1"; otherwise, report a "0".

(e) Parameter TPP3B: Report the *Ceriodaphnia dubia* $NOEC_S$ value for reproduction.

(f) Parameter TQP3B: Report the highest coefficient of variation (critical dilution or control) for *Ceriodaphnia dubia* reproduction.

(2) *Pimephales promelas* (Fathead minnow)

(a) Parameter TLP6C: If the Fathead minnow $NOEC_L$ for survival is less than the critical dilution, report a "1"; otherwise, report a "0".

(b) Parameter TOP6C: Report the Fathead minnow $NOEC_L$ value for survival.

(c) Parameter TJP6C: Report the Fathead minnow percent mortality in the critical dilution at test completion.

(d) Parameter TGP6C: If the Fathead minnow $NOEC_S$ for growth is less than the critical dilution, report a "1"; otherwise, report a "0".

(e) Parameter TPP6C: Report the Fathead minnow $NOEC_S$ value for growth.

(f) Parameter TQP6C: Report the highest coefficient of variation (critical dilution or control) for Fathead minnow survival and growth.

d. The permittee shall report the following results for all VALID toxicity retests on the DMR(s) for that reporting period.

(1) Retest #1 (STORET 22415): If the first monthly retest following failure of a routine test for either test species results in an $NOEC_L$ for survival less than the critical dilution, report a "1"; otherwise, report a "0".

(2) Retest #2 (STORET 22416): If the second monthly retest following failure of a routine test for either test species results in an $NOEC_L$ for survival less than the critical dilution, report a "1"; otherwise, report a "0".

Results of all retests shall be reported on a copy of the DMR for the reporting period (see Item 4.b above) in which the triggering routine test failure is experienced by no later than the 15th day of the month following completion of the retest. The full report for the retest (see Item 4.a above) shall be submitted along with the retest DMR. Even if a retest cannot be conducted before the end of the reporting period for which it is required (due to test initiation interval requirements), the retest results shall still be reported for the reporting period in which the triggering test failure is experienced. In this manner, both retests are reported for the same reporting period as the failed routine test. If retesting is not required during a given reporting period, the permittee shall leave these DMR fields blank.

5. MONITORING FREQUENCY REDUCTION

a. The permittee may apply for a testing frequency reduction upon the successful completion of the first two years of testing for one or both test species with no lethal or sublethal effects demonstrated at or below the critical dilution. Certification in accordance with Item 5.b of this section shall be submitted at the time of such application for monitoring frequency reduction. If granted, the monitoring frequency may be reduced to not less than once per 6 months (once each during the periods June 1 through September 30 and December 1 through March 31) for either test species.

b. CERTIFICATION: The permittee must certify in writing that no lethal or sublethal test failures have occurred for the species for which the monitoring frequency reduction is being requested and that all tests meet all test acceptability criteria in Item 3.a. above. In addition, the permittee must provide a summary of all tests initiated during the period of certification including test initiation dates, species, test acceptability parameters, $NOEC_L$ values, percent mortality at the critical dilution, $NOEC_S$ values, and coefficients of variation for the controls and critical dilutions. If the certification is approvable, the DEQ will issue a letter of confirmation of the monitoring frequency reduction. A copy of the confirmation letter will be forwarded to the DEQ's Permit Compliance System unit to update the permit reporting requirements. The DEQ may deny the certification if it determines that, during the period for which the certification is submitted, there were errors in meeting test acceptability requirements, errors in statistical interpretation affecting test results reported on DMRs, late submissions of test reports or submissions of substantively incomplete test reports. If the certification is denied, the permittee shall continue biomonitoring of the affected test species at a frequency of once per quarter until the permit is reissued.

c. SUBLETHAL FAILURES DURING FIRST YEAR OF TESTING: If, during the first year of testing, only a sublethal effect is demonstrated to a test species, continued routine testing for

that species is required for the remainder of the first year and, as necessary, into the following year(s) at the frequency prescribed in Part I until the effluent passes four consecutive routine tests for both lethal and sublethal test endpoints, at which time the permittee may apply for a monitoring frequency reduction in a manner consistent with Item 5.a above. Certification in accordance with Item 5.b of this section shall be submitted at the time of such application for monitoring frequency reduction. If granted, the monitoring frequency may be reduced in accordance with Item 5.a.

d. SURVIVAL FAILURES AFTER A MONITORING FREQUENCY REDUCTION: If any test fails the survival endpoint at any time after the granting of a monitoring frequency reduction, two monthly retests are required in accordance with Item 2 of this section (unless the permittee is performing a TRE) and the monitoring frequency for the affected test species shall be increased to the WET testing frequency prescribed in Part I until the permit is reissued.

e. This monitoring frequency reduction applies only until the expiration date of this permit, at which time the monitoring frequency for both test species reverts to the WET testing frequency prescribed in Part I until the permit is reissued.

6. TOXICITY REDUCTION EVALUATION (TRE)

a. Within ninety (90) days of confirming lethality in the retests for a test species, the permittee shall submit to the DEQ a Toxicity Reduction Evaluation (TRE) Action Plan and Schedule for conducting a TRE. The TRE Action Plan shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is an investigation intended to determine those actions necessary to achieve compliance with water quality-based effluent limits by reducing an effluent's toxicity to an acceptable level. A TRE is defined as a step-wise process which combines toxicity testing and analyses of the physical and chemical characteristics of a toxic effluent to identify the constituents causing effluent toxicity and/or treatment methods which will reduce the effluent toxicity. The TRE Action Plan shall lead to the successful elimination of effluent toxicity at the critical dilution and include the following:

(1) Specific Activities. The plan shall detail the specific approach the permittee intends to utilize in conducting the TRE. The approach may include toxicity characterizations, identifications and confirmation activities, source evaluation, treatability studies, or alternative approaches. When the permittee conducts Toxicity Characterization Procedures the permittee shall perform multiple characterizations and follow the procedures specified in the documents "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA-600/6-91/003) and "Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I" (EPA-600/6-91/005F), or alternate procedures. When the permittee conducts Toxicity Identification Evaluations and Confirmations, the permittee shall perform multiple identifications and follow the methods specified in the documents "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081), as appropriate.

The documents referenced above may be obtained through the National Technical Information Service (NTIS) by phone at (703) 487-4650, or by writing:

U.S. Department of Commerce
National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161

(2) Sampling Plan (e.g., locations, methods, holding times, chain of custody, preservation, etc.). The effluent sample volume collected for all tests shall be adequate to perform the toxicity test, toxicity characterization, identification and confirmation procedures, and conduct chemical specific analyses when a probable toxicant has been identified. Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity. Where lethality was demonstrated within 48 hours of test initiation, each composite sample shall be analyzed independently. Otherwise, the permittee may substitute a composite sample, comprised of equal portions of the individual composite samples, for the chemical specific analysis.

(3) Quality Assurance Plan (e.g., QA/QC implementation, corrective actions, etc.).

(4) Project Organization (e.g., project staff, project manager, consulting services, etc.).

b. The permittee shall initiate the TRE Action Plan within thirty (30) days of plan and schedule submittal. The permittee shall assume all risks for failure to achieve the required toxicity reduction.

c. The permittee shall submit to the DEQ a quarterly TRE Activities Report with the Discharge Monitoring Report in the months of January, April, July and October, containing information on toxicity reduction evaluation activities including:

(1) any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;

(2) any studies/evaluations and results on the treatability of the facility's effluent toxicity; and

(3) any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution.

d. The permittee shall submit to the DEQ a Final Report on Toxicity Reduction Evaluation Activities no later than twenty-eight (28) months from confirming lethality in the retests, which provides information pertaining to the specific control mechanism selected that will, when implemented, result in reduction of effluent toxicity to no significant lethality at the critical dilution. The report will also provide a specific corrective action schedule for implementing the selected control mechanism.

e. Quarterly testing during the TRE is a minimum monitoring requirement. The DEQ recommends that permittees required to perform a TRE not rely on quarterly testing alone to ensure success in the TRE, and that additional tests be performed to capture toxic samples for identification of toxicants. Failure to identify the specific chemical compound causing toxicity

test failure will normally result in a permit limit for whole effluent toxicity per federal regulations at 40 CFR 122.44(d)(1)(v).

SECTION B. Reevaluation of Ammonia Toxicity:

This permit may be reopened for reevaluation of ammonia toxicity-based limits after the relationship between the ammonia levels in the effluent and biomonitoring results have been established following a minimum of one year of testing.

SECTION C. Sludge Requirements

1. Sewage sludge disposal practices shall comply with the federal regulations for landfills, sludge, and solid waste disposal established at 40 CFR Part 257, 503 and the Department rules governing Sludge Management (OAC 252:647).

2. Sewage sludge disposal shall also comply with the requirements of Sludge Management Plan number 3501003 approved by the DEQ on November 1, 1996, which allows the permittee to land applied at the following locations: E/2 of NE/4 of NE/4 of Section 4, T14N, R25E; NW/4 of NW/4 of Section 3, T14N, R25E and east 1000' of NE/4 of Section 12, T15N, R25E and part of SW/4 of Section 14, T15N, R25E. However, sludge is normally disposed of in Cherokee National Landfill at a site located in 240 acres of NE/4 of N/2 of SE of Section 10, T14 N, R25 E, Indian Meridian, Adair County, State of Oklahoma.

3. In addition, the permittee shall also comply with all applicable sewage sludge requirements specified in Part IV of this permit.

SECTION D. Pollution Prevention Requirements

1. The permittee shall institute a program within 12 months of the effective date of the permit (or continue on existing one) directed towards optimizing the efficiency and extending the useful life of the facility. The permittee shall consider the following items in the program:

   a. The influent loadings, flow and design capacity;

   b. The effluent quality and plant performance;

   c. The age and expected life of the wastewater treatment facility's equipment;

   d. Bypasses and overflows of the tributary sewerage system and treatment works;

   e. New developments at the facility;

f. Operator certification and training plans and status;

g. The financial status of the facility;

h. Preventative maintenance programs and equipment conditions and;

i. An overall evaluation of conditions at the facility.

2. The permittee shall prepare the following information on the sewage sludge generated by the facility.

a. An annual quantitative tabulation of the ultimate disposition of all sewage sludge (including, but not limited to, the amount beneficially reused, landfilled, surface disposed, and incinerated).

b. An assessment of technological processes and an economic analysis evaluating the potential for beneficial reuse of all sewage sludge not currently beneficially reused including a listing of any steps which would be required to achieve the sludge quality necessary to beneficially reuse the sludge.

c. A description of, including the expected results and the anticipated timing for, all projects in process, in planning and/or being considered which are directed towards additional beneficial reuse of sewage sludge.

d. An analysis of one sludge sample collected prior to ultimate re-use or disposal shall be performed for the pollutants listed in Part IV, Element 1, Section III, Table 3 of the permit.

e. A listing of the specific steps (controls/changes) which would be necessary to achieve and sustain the quality of the sludge so that the pollutant concentrations in the sludge fall below the pollutant concentration criteria listed in Part IV, Element I, Section III, Table 3 of the permit.

f. A listing of, and the anticipated timing for, all projects in process, in planning, and/or being considered which are directed towards meeting the sludge quality referenced in (e) above.

The permittee shall certify in writing, within three years of the effective date of the permit, that this information is available. This certification shall be submitted to:

Oklahoma Department of Environmental Quality
Water Quality Division / Compliance Section
707 North Robinson, P.O. Box 1677
Oklahoma City, Oklahoma 73101-1677

SECTION E. CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS

1. The following pollutants shall not be introduced into a Publicly Owned Treatment Works (POTW) facility, defined in 40 CFR 403.3(o) "as any devices and systems used in storage, treatment, recycling and reclamation of municipal sewage and industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in Section 502(4) of the Act, which has jurisdiction over the Indirect Discharges to and from such treatment works."

   a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW),
   including, but not limited to, wastestreams with a closed cup flashpoint of less than 60°C (140°F) using the test methods specified in 40 CFR 261.21;

   b Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH
   lower than 5.0, unless the works are specifically designed to accommodate such discharges;

   c Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in interference;

   d Any pollutant, including oxygen demanding pollutants (e.g., BOD), released in a discharge at a flow rate
   and/or pollutant concentration which will cause interference with the POTW;

   e Heat in amounts which will inhibit biological activity in the POTW resulting in interference but in no
   case heat in such quantities that the temperature at the POTW treatment plant exceeds 40°C (104°F)
   unless the Approval Authority, upon request of the POTW, approves alternate temperature limits;

   f Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;

   g Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and

   h Any trucked or hauled pollutants, except at discharge points designated by the POTW.

2. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Act, including any requirements established under 40 CFR Part 403.

3. The permittee shall provide adequate notice of the following:

   a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Act and/or Sections 40 CFR 405-499 if it were directly discharging those pollutants; and

   b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

      Any notice shall include information on (i) the quality and quantity of effluent to be introduced into the treatment works, and (ii) any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.